



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,922	03/24/2004	Kenji Akahoshi	16869S-111700US	8046
20350 7590 10/23/2007 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			EXAMINER DANIELSEN, NATHAN ANDREW	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 10/23/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/808,922

Applicant(s)

AKAHOSHI ET AL.

Examiner

Nathan Danielsen

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 10-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2627

### **DETAILED ACTION**

1. Claims 1, 3-7, and 10-14 are pending. Claims 2, 8, 9, 15, and 16 were canceled in applicant's amendment filed 14 August 2007.

### ***Claim Objections***

2. The claims are objected to for the following reasons:
  - a. In claims 1, 7, and 14, "nor on" should be changed to --or--;
  - b. In claim 6, "and destined for irradiation with the laser beam" should be omitted or amended in a manner similar to the limitations canceled from claim 1;
  - c. In claim 7, "both are located" should be changed to --both located--;
  - d. In claim 12, "and destined for irradiation with the laser beam" should be omitted or amended in a manner similar to the limitations canceled from claim 7; and
  - e. In claim 13, "on and inner" should be changed to --on an inner--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1, 3-7, 10-12, and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
5. Regarding claims 7, 10-12, and 14, applicant has not disclosed a recording management area located on an outer periphery of an optical disc (see figure 6, where the dark line between the "data area" and the "PCA" does not comprise a recording management area).

Art Unit: 2627

6. Claims 1, 3-7, 10-12, and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. Regarding claims 1, 7, and 14, each claim claims where "said control means controls said objective lens driving means such that the laser beam is not irradiated on the power calibration area nor on the recording management area while controlling said laser diode driver module for emitting the laser beam". Applicant's specification fails to enable one skilled in the art to make or use the invention of these claims, which do not control the emitted laser via the laser diode driver module while irradiating the PCA and RMA areas of an optical disk. This is because the above mentioned limitation implies that, when the laser beam is irradiated on the PCA and RMA, the emitted laser, via the laser diode driver module, is not controlled, which could then cause the destruction of data that applicant's invention is attempting to prevent. Further, this implication of the limitation would require undue experimentation since it is well known in the optical disk/optical disk drive art that in order to irradiate the PCA and RMA (or, for that matter, any other portion of the optical disk containing any kind of data) without destroying data, the emitted light *must* be controlled at a level such that sufficient light is reflected back to the photodetector to generate servo and data signals while simultaneously not overwriting or otherwise destroying that data. Claims 3-6 and 10-12 are rejected as failing to comply with the enablement requirement since each requires every limitation of the claim(s) on which it depends.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1, 3-7, and 10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Regarding claims 1, 7, and 14, it is unclear where the laser beam is irradiated if it is not irradiated on the only areas the claimed disk comprises, namely the PCA and the RMA. For purposes of

Art Unit: 2627

examination, the last paragraph has been interpreted to be --said control means controls said objective lens driving means such that the laser beam is not irradiated on the power calibration area nor on the recording management area while controlling said laser diode driver module for emitting the laser beam to irradiate a mirror area located radially inwardly/outwardly of the power calibration area and the recording management area--, as shown in figures 1 and 5.

11. Claim 6 recites the limitation "the area located radially inwardly..." and claim 12 recites the limitation "the area located radially outwardly...". There is insufficient antecedent basis for these limitations in the claims.

12. Regarding claims 13 and 14, it is unclear if the limitation "an inner periphery thereof" refers back to the claimed "recordable optical disk" or to the claimed "power calibration area". For purposes of examination, "an inner periphery thereof" is interpreted to refer back to the "recordable optical disk".

#### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 3-6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe, in view of Fennema et al (US Patent 5,425,013; hereinafter Fennema).

Regarding claims 1 and 13, Osakabe discloses an optical disk apparatus (and associated method) (figures 1 and 5) for recording data on a recordable optical disk having a power calibration area and a recording management area both located on an inner periphery thereof (elements 22, 24, and 32 in figure 3), comprising:

- a laser diode for emitting a laser beam (inherent in element 36 in figure 5);
- a laser diode driver module for driving said laser diode (element 40 in figure 5);
- an objective lens for constricting the laser beam (inherent in element 36 in figure 5);

Art Unit: 2627

objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk (inherent in element 48 in figure 5); and  
control means for controlling said laser diode driver module and said objective lens driving means (element 46 in figure 5),  
wherein said control means controls said objective lens driving means such that the laser beam is not irradiated on the power calibration area nor on the recording management area while controlling said laser diode driver module for emitting the laser beam (inherent in recording/reproducing to/from element 28 in figure 3).

However, Osakabe fails to disclose where said laser diode driver module is controlled for emitting the laser beam to irradiate a mirror area located radially inwardly of the power calibration area and the recording management area.

In the same field of endeavor, Fennema discloses where said laser diode driver module is controlled for emitting the laser beam to irradiate a mirror area located radially inwardly/outwardly of the power calibration area and the recording management area (col. 3, lines 7-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have calibrated the power of an emitted laser beam while making use of an area on a radially inner side beyond the PCA and RMA, as taught by Fennema, for the purpose of preventing the calibration results from being skewed by a non-constant reflection signal by performing laser calibration in the mirror area of a disk (col. 3, lines 17-25).

Regarding claim 3, Osakabe, in view of Fennema, discloses everything claimed, as applied to claim 1. However, Osakabe fails to disclose where said objective lens driving means is operable to cause said objective lens to seek a location close to an innermost periphery of the power calibration area and subsequently move said objective lens more radially inwardly than the power calibration area and the recording management area.

In the same field of endeavor, Fennema discloses where said objective lens driving means is operable to cause said objective lens to seek a location close to an innermost periphery of the power calibration area and subsequently move said objective lens more radially inwardly than the power

Art Unit: 2627

calibration area and the recording management area (col. 3, lines 7-38; where, in Osakabe, the mirror area 18 is located close to and more radially inward than the PCA area 22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have moved the pickup in whichever direction is necessary to find the mirror region after finding a point of reference on the disk, as taught by Fennema, for the purpose of preventing the calibration results from being skewed by a non-constant reflection signal by performing laser calibration in the mirror area of a disk (col. 3, lines 17-25).

Regarding claims 4 and 5, Osakabe, in view of Fennema, discloses everything claimed, as applied to claim 1. Additionally, Osakabe discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon moving said objective lens radially inwardly beyond the power calibration area and the recording management area, said objective lens is roughly moved by using said slider and thereafter said objective lens is finely moved by means of said tracking coil (§ 32).

Regarding claim 6, Osakabe, in view of Fennema, discloses everything claimed, as applied to claim 1. Additionally, Osakabe discloses where the area located inwardly of the power calibration area and the recording management area and destined for irradiation with the laser beam is an area in which data cannot be recorded (§ 26).

15. Claims 7, 10-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe, in view of Wang et al (US Patent Application Publication 2002/0110065; hereinafter Wang) and Fennema.

Regarding claims 7 and 14, Osakabe discloses an optical disk apparatus (and associated method) (figures 1 and 5) for recording data on a recordable optical disk having a power calibration area and a recording management area (figure 3; note also the mirror area 20), comprising:

- a laser diode for emitting a laser beam (inherent in element 36 in figure 5);
- a laser diode driver module for driving said laser diode (element 40 in figure 5);
- an objective lens for constricting the laser beam (inherent in element 36 in figure 5);

Art Unit: 2627

objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk (inherent in element 48 in figure 5); and  
a control circuit for controlling said laser diode driver module and said objective lens driving means (element 46 in figure 5),  
wherein said control circuit controls said objective lens driving means such that the laser beam is not irradiated on the power calibration area nor on the recording management area while controlling said laser diode driver module for emitting the laser beam (inherent in recording/reproducing to/from element 28 in figure 3).

However, Osakabe fails to disclose where the power calibration area is located on a outer peripheral side of the disk and where said laser diode driver module is controlled for emitting the laser beam to irradiate a mirror area located radially outwardly of the power calibration area and the recording management area.

In the same field of endeavor, Wang discloses a power calibration area located on a radially outer peripheral side (element 48 in figure 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the optical disk of Osakabe with the layout of the disk of Wang, for the purpose of obtaining optimum recording powers for the entire disk (§s 6 and 7). However, Wang also fails to disclose where said laser diode driver module is controlled for emitting the laser beam to irradiate a mirror area located radially inwardly/outwardly of the power calibration area and the recording management area.

In the same field of endeavor, Fennema discloses where said laser diode driver module is controlled for emitting the laser beam to irradiate a mirror area located radially inwardly/outwardly of the power calibration area and the recording management area (col. 3, lines 7-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have calibrated the power of an emitted laser beam while making use of an area on a radially inner side beyond the PCA and RMA, as taught by Fennema, for the purpose of preventing the calibration results from being skewed by a non-constant reflection signal by performing laser calibration in the mirror area of a disk (col. 3, lines 17-25).



Art Unit: 2627

Regarding claims 10 and 11, Osakabe, in view of Wang and Fennema, discloses everything claimed, as applied to claim 7. Additionally, Osakabe discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon moving said objective lens outwardly beyond the power calibration area, said objective lens is roughly moved by using said slider and thereafter said objective lens is finely moved by means of said tracking coil (§ 32).

Regarding claim 12, Osakabe, in view of Wang and Fennema, discloses everything claimed, as applied to claim 7. Additionally, Osakabe discloses where the area located radially outwardly of the power calibration area and destined for irradiation with the laser beam is an area in which data cannot be recorded (§ 26).

### ***Response to Arguments***

16. Applicant's arguments, see pages 6-9, filed 14 March 2007, with respect to the rejection(s) of claim(s) 1, 3-7, and 10-14 under 35 U.S.C. § 103(a) have been fully considered and are not persuasive.

a. Regarding applicant's argument that "Osakabe, in combination with any reference does not render obvious where in 'the control means controls ... such that the laser beam is not irradiated on the power calibration area nor on the recording management area'", the examiner disagrees. As stated above, the PCA and RMA areas of the disk are not the only areas on the disk that can be irradiated by a controlled laser beam since the data, lead-in, and lead-out areas, among others, must also be irradiated with a controlled laser beam. Further, this argument is based on only a partial limitation and not the complete limitation which specifies the controlling of the laser beam while not irradiating the power calibration area or the recording management area.

b. Further, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It should also be noted that the

Art Unit: 2627

*combinations* of Osakabe/Fennema and Osakabe/Fennema/Wang teach irradiating the *mirror areas* of the disks (elements 18 and 20 in figure 3 of Osakabe and col. 3, lines 17-25 of Fennema) for performing power calibration of a laser diode.

c. For these reasons, the above rejections are still deemed proper and are hereby maintained.

***Closing Remarks/Comments***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:00 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Daniels  
10/16/2007

/William Korzuch/  
SPE, Art Unit 2627